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B.S.E.E., 1956, University of Maine. Joined IBM in 1956 to work on the Stretch-Harvest System. In 1962, became a member of the planning group which developed the organization for the System 360/Model 91, and is now concerned with testing of the development model.

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Systems Development Division, Sunnyvale, California

B.S.E.E., 1954, University of Vermont. Has since done graduate work at Syracuse University. Joined IBM in 1954, for development work on the IBM 705 Magnetic Core Storage Unit. Since then, he has had design responsibilities on the IBM 7030 and 7094 Central Processing Units. Has been manager of a group working on the System/360 Model 91 Floating Point Execution Unit. Presently assigned to the Advanced Computing Systems group at the Systems Development Division Laboratories at Sunnyvale, California. Member, IEEE.

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B.E.E., 1956, Manhattan College; M.E.E., 1963, Syracuse University. Joined IBM in June, 1956 to do logic design of a series of computers, the most recent being the 7094 and 7094-II systems. Presently assigned to the design of a high performance storage control unit. Member, IEEE; licensed N. Y. State Professional Engineer.

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Columbia College, Columbia University, 1955-58. Computer design electrical engineer at Underwood Research Laboratories, 1958-59. Joined IBM in 1959 at Poughkeepsie where he has worked on a number of logic design projects. Most recently he had the technical responsibility for the design and implementation of the central processing unit of the System/360 Model 90 series. He is currently on a Sloan Engineering Fellowship at the MIT Center for Advanced Engineering Study. Member, IEEE and the Society for General Systems Research.

Michael J. Flynn

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B.S.E.E., 1955, Manhattan College; M.S.E.E., 1960, Syracuse University; Ph.D., 1961, Purdue University. Joined IBM in 1955 at Endicott, New York where he worked on transistor circuit design. Later, he transferred to the Systems Development Division laboratories in Poughkeepsie where he was responsible for prototype development of the 7090 and 7094 II Computing Systems. During academic years (1959-1961), he was visiting instructor of Electrical Engineering at Purdue. More recently, he was engaged in planning for System/360 and in study programs for development of high speed computing systems. Until September, 1965, he was manager responsible for the design and development of System 360/Model 91 Central Processing Unit. Is now on the faculty of Northwestern University in the Electrical and Industrial Engineering Departments; while on leave of absence from the Federal Systems Division. Member Eta Kappa Nu, IEEE, ACM, AAAS.

Robert E. Goldschmidt

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S.B. and S.M. in Electrical Engineering, 1964, MIT. As an MIT cooperative student, he worked for IBM at Endicott on development of the 1050 Terminal. Joined IBM in 1964 at Poughkeepsie, where he participated in design work on the System 360/Model 91 Floating Point Execution Unit. Presently engaged in proposal and evaluation of future high-performance computing systems.

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B.E.E., 1958, Polytechnic Institute of Brooklyn. Joined IBM in 1958 at Poughkeepsie and worked in the development of a real-time data channel for the Advanced Systems Development Division. Transferred to the Systems Development Division in 1961 and is currently engaged in the development of the Peripheral Storage Control Element for System 360/Model 91.

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Components Division, East Fishkill, New York

B.S. in Electrical Engineering, 1960, Michigan State University. Joined IBM in 1960 for work in semiconductor device development. Worked on SLT and ASLT devices and, recently, on monolithic logic technology. Is now manager of an advanced logic products group developing high-speed transistors. Member, IEEE, RESA and Eta Kappa Nu.

Robert H. F. Lloyd

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B.S. in Electrical Engineering, 1957, Tufts University; graduate study in Physics, 1958-59, Stevens Institute of Technology. Worked in transistor manufacturing and semiconductor development at RCA, Somerville, New Jersey, 1957-1960. In 1960, joined IBM at Poughkeepsie to work with a semiconductor applications group. Subsequently, managed a number of groups in component and memory development, notably in SLT and ASLT development, and is currently manager of device technology for the advanced computing systems group in Sunnyvale. Member, IEEE.

Paul R. Low

Components Division, East Fishkill, New York

B.S.E.E., 1955, University of Vermont; M.S. in Physics, 1957, University of Vermont; Ph.D. in Electrical Engineering, 1963, Stanford University. Previously employed as a member of the technical staff of the Bell Telephone Laboratory and as an instructor at the University of Vermont. Joined IBM in 1957 for work on advanced circuit development and is now manager of small machine technology in the Components Division. Member, IEEE, Nu Beta Pi and Sigma Xi.

Alphonse U. Marcotte

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Dpl. in Chemical Engineering, 1954, Delhi Polytechnique; M.S. in Ceramic Engineering, 1962, North Carolina State College; Ph.D. in Ceramic Engineering, 1964, University of California, Berkeley. Has worked in x-ray diffraction analysis, differential thermal analysis and thermogravimetric analysis of various compound mixtures involved in cement manufacture. Worked as a Chemical Engineer in charge of production and quality control of a cement plant in India for nine years, after which he came to the U.S.A. for graduate studies. He was an assistant professor in the Department of Mineral Technology, University of California at Berkeley, from 1964 to 1966, during which time he was also a consultant to the IBM development laboratory at San Jose. He is, at present, assistant works manager at the Jaipur Udyog Cement Works.

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B.S.E.E., 1951, Drexel Institute of Technology. Joined IBM as a Customer Engineer in 1951. From 1956 to 1958 was a Field Manager of 700 series system. Transferred to the development laboratories in Poughkeepsie where he participated in the design and development of the Harvest computer from 1959 to 1962. Presently design manager of the Peripheral Storage Control Element for System 360/Model 91.

Simon Middelhoeck

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M.S. in Physical Engineering, 1956, Technical University of Delft, Holland; Ph.D. in Physics, 1961, University of Amsterdam. Assistant in Physics 1953 to 1956. Joined IBM in 1956 as physicist in the Zurich Research Laboratory. His present field of interest is semiconductor devices. Member, Dutch Physical Society, Royal Institute of Engineers and the German Study Group on Ferromagnetism.

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B.S. in Electrical Engineering, 1959, Virginia Polytechnic Institute. Joined IBM in 1959 at Poughkeepsie and worked on the IBM 7030 and Harvest computers. Since 1962, has been engaged in the organization and design of large-scale scientific processors which culminated in the System 360/Model 91. Member, Tau Beta Pi, Eta Kappa Nu, Phi Beta Kappa, and IEEE.

Robert F. Sechler

Components Division, East Fishkill, New York

B.S. in Engineering Physics, 1961, Lehigh University. Joined the IBM Components Division in June 1961 for work in logic diode specifications. Has recently worked on SLT logic circuit specifications and ASLT circuit development. Currently assigned to monolithic logic circuit design.

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Data Processing Division, San Jose, California

B.Sc. Tech., 1953, and M.Sc. Tech., 1955, University of Bombay; M.S. in Chemical Engineering, 1957, University of Michigan; Ph.D. in Chemical Engineering, 1960, University of California, Berkeley. Joined IBM in 1960 at San Jose in the Systems Development Division to conduct investigation in the area of electrical birefringence of colloids. Subsequently, he has worked in the area of simulation and process control in cement, ammonia, ethylene, and styrene. He has also conducted classes in advanced control system education for engineers from IBM as well as customers. Dr. Shah transferred to the Control Systems Development Center of the Data Processing Division in June, 1965. His areas of interest are formulation of mathematical models of chemical processes, model simplification, applied mathematics in chemical engineering, fluid mechanics and heat transfer. Member, Phi Lambda Upsilon and American Institute of Chemical Engineers. He was Director of the South Bay Subsection of AIChE in 1964-65.

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Systems Development Division, Poughkeepsie, New York

B.E.E., 1949, and M.E.E., 1952, University of Virginia. Participated in the design of instrumentation and electronic tracking systems at Sandia Corporation and Hastings Instrument Company. Joined IBM in 1955, and initially worked on the SAGE System computer. Subsequently worked on the IBM 7030 computer and in Tele-Processing Systems. Is now design manager of the Main Storage Control Element for the System 360/Model 91. Member IEEE, Sigma Xi and Tau Beta Pi.

F. J. Sparacio

Systems Development Division, Poughkeepsie, New York

B.S.E.E., 1956, Rutgers University. Joined IBM in June, 1956 to work on the planning and design of the IBM 7030 and Harvest computers. Began work with a group planning the System 360/Model 91 System in 1961. Presently managing the design and testing of the Instruction and Fixed-Point Units of the Model 91. Member, IEEE.

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B.A. in Physics, 1958, New York University; M.S. in Electrical Engineering, 1960, New York University. Worked on silicon photoelectric devices, Bell Telephone Laboratories, 1958-1961. Joined IBM in 1961 to work in logic module applications engineering and later was manager of an ASLT circuit engineering group. Presently working in logic products engineering. Member, Eta Kappa Nu and Sigma Pi Sigma.

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B.E.E., 1956, Manhattan College; M.E.E., 1960, Syracuse University. Joined IBM in 1956, at the research laboratory in Poughkeepsie to work on magnetic-logic devices. Subsequently worked on Teleprocessing systems and systems simulation, and is now engaged in high-performance computer design. Member, Eta Kappa Nu.

John R. Turnbull

Components Division, East Fishkill, New York

A.B., 1957; M.S., 1958, Dartmouth College. Joined IBM in 1958 in Poughkeepsie. Assisted in the development of high performance digital circuits in both the Poughkeepsie and East Fishkill Laboratories. Presently manager of a department engaged in integrated circuit development. Member, Phi Beta Kappa.

Ernest J. Van Derveer

Components Division, East Fishkill, New York

B.S.E.E., 1954; M.S.E.E., 1956, Rutgers University. Joined RCA Semiconductor Division in 1956, where he worked on computer semiconductor products. Came to IBM Components Division, Poughkeepsie, in 1962 as member of the Semiconductor Planning Staff. Currently, he is manager of the developmental pilot line group working on integrated logic circuits. Member, Tau Beta Pi, Sigma Xi, Eta Kappa Nu, and IEEE.

Daniel Wild

Research Division, Zurich, Switzerland

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